What is claimed is:

1. An optical body, comprising:

a first phase; and

a second phase which is co-continuous with said first phase along at least one axis; wherein said first and second phases are polymeric, and wherein the refractive index difference between said first and second phases is at least about 0.05 along a first axis and is less than about 0.05 along a second axis.

2. The optical body of claim 1, wherein said second phase is co-continuous with said first phase along at least two mutually orthogonal axes.

3. The optical body of claim 1, wherein said second phase is co-continuous with said first phase along three mutually orthogonal axes.

4. The optical body of claim 1, wherein said optical body is a film, and wherein said second axis is perpendicular to the plane of said film.

5. The optical body of claim 1, wherein said first and second phases are co-continuous within a plane defined by first and second mutually orthogonal axes, and wherein said first and second phases are co-continuous along said first and second axes.

6. The optical body of claim 1, wherein one of said first and second phases have a birefringence of at least about 0.05, and the other of said first and second phases has a birefringence of less than about 0.05.

7. The optical body of claim 1, wherein said first phase has a birefringence of at least about 0.1, and said second phase has a birefringence of less than about 0.05.

8. The optical body of claim 1, wherein said first phase has a birefringence of at least about 0.2, and said second phase has a birefringence of less than about 0.05.

9. The optical body of claim 1, wherein said first phase has a birefringence of at least about 0.05, and said second phase has a birefringence of less than about 0.02.

10. The optical body of claim 1, wherein said first phase has a birefringence of at least about 0.05, and the other of said first and second phases has a birefringence of less than about 0.01.

11. The optical body of claim 1, wherein said first phase has an index of refraction which differs from said second phase by more than about 0.1 along said first axis.

12. The optical body of claim 1, wherein said first phase has an index of refraction which differs from said second phase by more than about 0.15 along said first axis.

13. The optical body of claim 1, wherein said first phase has an index of refraction which differs from said second phase by more than about 0.2 along said first axis.

14. The optical body of claim 1, wherein said first phase has an index of refraction which differs from said second phase by less than about 0.03 along said second axis.

15. The optical body of claim 1, wherein said first phase has an index of refraction which differs from said second phase by less than about 0.01 along said second axis.

16. The optical body of claim 1, wherein said first and second phases taken together have a diffuse reflectivity along said at least one axis of at least about 50% for both polarizations of electromagnetic radiation.

17. The optical body of claim 1, wherein said optical body has a total reflectivity of greater than about 50% for a first polarization of electromagnetic radiation and a total transmission of greater than about 50% for a second polarization of electromagnetic radiation orthogonal to said first polarization.

18. The optical body of claim 17, wherein said optical body has a total reflectivity of greater than about 60% for said first polarization of electromagnetic radiation.

19. The optical body of claim 17, wherein said optical body has a total reflectivity of greater than about 70% for said first polarization of electromagnetic radiation.

20. The optical body of claim 17, wherein said optical body has a total transmission of greater than about 60% for said second polarization of electromagnetic radiation.

21. The optical body of claim 17, wherein said optical body has a total transmission of greater than about 70% for said second polarization of electromagnetic radiation.

22. The optical body of claim 1, wherein a first polarization of light is substantially diffusely reflected, and wherein at least about 40% of a second polarization light polarized orthogonal to said first polarization of light is transmitted through said optical body with an angle of deflection of less than about 8°.

23. The optical body of claim 22, wherein at least about 60% of said second polarization of light is transmitted through said optical body with an angle of deflection of less than about 8°.

24. The optical body of claim 22, wherein at least about 70% of said second polarization of light is transmitted through said optical body with an angle of deflection of less than about 8°.

25. The optical body of claim 1, wherein at least one of said first and second phases comprises a thermoplastic resin.

26. The optical body of claim 25, wherein said thermoplastic resin is a syndiotactic vinyl aromatic polymer derived from a vinyl aromatic monomer.

27. The optical body of claim 25, wherein said thermoplastic resin comprises interpolymerized units of syndiotactic polystyrene.

28. The optical body of claim 25, wherein said thermoplastic resin comprises polyethylene naphthalate.

29. The optical body of claim 25, wherein one of said first and second phases comprises syndiotactic polystyrene, and the other of said first and second phases comprises polyethylene naphthalate.

30. The optical body of claim 25, wherein both of said first and second phases comprises a thermoplastic polymer.

31. The optical body of claim 1, wherein said optical body is stretched to a stretch ratio of at least about 2.

32. The optical body of claim 1, wherein said optical body is stretched to a stretch ratio of at least about 4.

33. The optical body of claim 1, wherein said optical body is stretched to a stretch ratio of at least about 6.

34. The optical body of claim 1, wherein said first and second phases are immiscible.

35. The optical body of claim 1, wherein said first phase is an open-celled material, and wherein the cells of said first phase are substantially aligned along at least one common axis.

36. The optical body of claim 35, wherein said second phase is dispersed within said cells of said first phase.

37. The optical body of claim 35, wherein said cells have an aspect ratio of at least about 2.

38. The optical body of claim 35, wherein said cells have an aspect ratio of at least about 5.

39. The optical body of claim 35, wherein said cells are essentially elliptical in cross-section.

40. The optical body of claim 1, wherein said optical body is oriented in at least two directions.

41. The optical body of claim 1, wherein said optical body has a plurality of layers.

42. The optical body of claim 1, wherein the extinction ratio of said optical body is greater than about 3.

43. The optical body of claim 1, wherein the extinction ratio of said optical body is greater than about 5.

44. The optical body of claim 1, wherein the extinction ratio of said optical body is greater than about 10.

45. The optical body of claim 1, wherein the optical body is a film, and wherein the index difference between said first and second phases is less than about 0.05 along an axis perpendicular to the surface of said film.

46. The optical body of claim 1, wherein the diffuse reflectivity of said first and second phases taken together along at least one axis for at least one polarization of visible, ultraviolet, or infrared electromagnetic radiation is at least about 30%.

47. The optical body of claim 46, wherein said optical body has an axis of specular reflection, and wherein said electromagnetic radiation is distributed anisotropically about said axis of specular reflection.

48. The optical body of claim 46, wherein said optical body is stretched in at least one direction and has an axis of specular reflection, and wherein the diffusely reflected portion of said at least one polarization of electromagnetic radiation is distributed primarily along or near the surface of a cone whose axis is centered on the stretch direction and whose surface contains the specularly reflected direction.

49. The optical body of claim 47, wherein said first and second phases are aligned along a common axis, wherein said optical body is stretched in at least one direction, and wherein the diffusely reflected portion of said at least one polarization of electromagnetic radiation is distributed primarily along or near the surface of a cone whose axis is centered on the axis of alignment of said first and second phases and whose surface contains the specularly reflected direction.

50. The optical body of claim 49, wherein said optical body has an axis of specular transmission, and wherein the electromagnetic radiation is distributed anisotropically about said axis of specular transmission.

51. The optical body of claim 1, wherein said optical body is stretched in at least one direction and spectrally transmits light in at least one direction, wherein at least about 40% of light polarized orthogonal to a first polarization of light is diffusely transmitted through said optical body, and wherein the rays of the diffusely transmitted light are distributed primarily along or near the surface of a cone whose surface contains the direction of spectral transmission and whose axis is centered on the stretch direction.

52. The optical body of claim 1, wherein said second phase comprises elongated inclusions whose axes of elongation are aligned in a common direction, wherein said optical body is stretched in at least one direction, and wherein the diffusely transmitted portion of said at least one polarization of electromagnetic radiation is distributed primarily along or near the surface of a cone whose axis is centered on the axis of elongation and whose surface contains the diffusely transmitted direction.

53. The optical body of claim 1, wherein the optical body is a film, and wherein the index difference between said first and second phases is less than about 0.02 along an axis perpendicular to the surface of said film.

54. The optical body of claim 1, further comprising a dichroic dye.

55. An optical body, comprising:

an interpenetrating network of a first polymer and a second polymer;

wherein the refractive index difference between said first and second polymers is at least about 0.05 along a first axis and is less than about 0.05 along a second axis.

56. The optical body of claim 55, wherein the absolute value of the difference in index of refraction of said first and second phases is Δn_1 along a first axis and Δn_2 along a second axis orthogonal to said first axis, and wherein the absolute value of the difference between Δn_1 and Δn_2 is at least about 0.05.

57. An optical body, comprising:

an open-celled polymeric first phase; and

a second phase disposed within the cells of said first phase;

wherein the absolute value of the difference in index of refraction of said first and second phases is Δn_1 along a first axis and Δn_2 along a second axis orthogonal to said first axis, and wherein the absolute value of the difference between Δn_1 and Δn_2 is at least about 0.05.

58. The optical body of claim 57, wherein the diffuse reflectivity of said first and second phases taken together along at least one axis for at least one polarization of electromagnetic radiation is at least about 30%.

59. The optical body of claim 57, wherein wherein the absolute value of the difference between Δn_1 and Δn_2 is at least about 0.1.

60. The optical body of claim 57, wherein said first phase has a larger birefringence than said second phase.

61. The optical body of claim 57, wherein the birefringence of said first phase is at least 0.02 greater than the birefringence of said second phase.

62. The optical body of claim 57, wherein the birefringence of said first phase is at least 0.05 greater than the birefringence of said second phase.

63. The optical body of claim 57, wherein said first phase contains a network of interconnecting pores, and wherein said second phase is disposed in said network.